

Abstracts

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model were obtained from published clinical trials and were complemented with Mexican expert opinion surveys. Effectiveness measure was the number of patients with articular pain controlled without adverse events (peptic ulcers, gastrointestinal bleeding, and others). The analysis was conducted from the healthcare payer's perspective. Resource use and costs were obtained from hospital records and Mexican official databases. Threshold and probabilistic sensitivity analysis was performed and acceptability curves were constructed. **RESULTS:** The model indicates that the use of celecoxib could lead to the avoidance of a significant number of adverse events associated to NSAIDs and acetaminophen. Celecoxib showed on the six-months period similar ($p = 0.52$) expected costs per patient (US\$609.8) than the treatment with NSAIDs (US\$615.6) and lower costs ($p < 0.01$) compared with acetaminophen (US\$656.7). On the other hand, celecoxib was associated with higher effectiveness (371 patients, CI 95% 255–452) followed by NSAIDs and acetaminophen (274 and 270 patients, respectively). Results were robust to Monte Carlo first order sensitivity analysis. Acceptability curves showed the same results with a mean of 44.5% of certainty. **CONCLUSIONS:** Despite its higher cost in the Mexican market, celecoxib was cost-effective for the management of articular pain in patients with osteoarthritis.

PAR10

COST-EFFECTIVENESS OF RITUXIMAB THERAPY FOR RHEUMATOID ARTHRITIS: A PAN-EUROPEAN ANALYSIS

Kielhorn A¹, Rubbert A², Porter D³, De Vita S⁴, Brown B⁵, Aristides M⁵, Aultman R¹, Jost F¹

¹F. Hoffmann-La Roche Ltd, Basel, Switzerland, ²Medizinische Klinik I, Köln, Germany, ³Gartnavel General Hospital, Glasgow, Lanarkshire, UK, ⁴Policlinico Universitario Udine, Udine, Italy, ⁵M-TAG UK Ltd, London, UK

OBJECTIVES: Clinical studies such as REFLEX established the efficacy of rituximab (RTX) in patients with rheumatoid arthritis (RA) who have had an inadequate response to anti-TNF therapy. This analysis evaluated the cost-effectiveness of treating such patients with RTX across different EU countries. **METHODS:** Our cost-effectiveness model assessed RA treatments in a real-life setting based on practices in Germany, Italy, Spain, France, and the UK. The model is based on ACR response rates for RTX and current treatment options (adjusted for the different study populations), complemented with epidemiological data from observational studies. It simulates a cohort of 10,000 patients who have failed to respond to anti-TNF therapy. Baseline patient characteristics were from the REFLEX study. For each country, the cost-effectiveness of providing RTX either as an additional treatment or an alternative to a second-line biologic DMARD was examined using a treatment duration for biological therapy (in combination with methotrexate) of up to 4.25 years. QALYs were mapped from a disease severity measure (HAQ score) and resource utilization data were UK or German registry data. The model included costs related to drug therapy (including administration and monitoring), palliative care and reduced productivity (indirect costs) (2004–5 Euros [€]). Costs and benefits were discounted at 3.5% per annum. **RESULTS:** Using RTX resulted in lower average annual cost compared to any of the anti-TNF treatments. The cost per QALY (direct medical cost) was in the range of €18,000 to €23,000 across all health care systems. When RTX is replacing a treatment option in the current treatment sequence, average annual treatment costs can be reduced. **CONCLUSIONS:** This pan-European analysis shows that adding RTX to the therapeutic armamentarium for patients with RA who respond inadequately to anti-TNF therapy is highly cost-effective, with an incremental cost

per QALY gained that is favourable compared to other disease-modifying, biological therapies.

PAR11

COST-EFFECTIVENESS ANALYSIS FOR TREATMENTS IN ANKYLOSING SPONDYLITIS

Vo P, Hay JW

University of Southern California, Los Angeles, CA, USA

OBJECTIVE: To perform a cost-effectiveness analysis on TNF-alpha inhibitors (Anti-TNFα) for treatment of Ankylosing Spondylitis (AS) in comparison to standard therapy alone from a societal perspective. **METHODS:** Decision-tree analysis was performed to estimate the incremental cost-effectiveness ratio (ICER) for Anti-TNFα treatments in AS patients. All model parameters (e.g. cost, response rates, EQ-5D derived utility values, etc.) were obtained from published literature and/or expert opinion. Total cost included cost relating to illness, drug, drug-related side effects, chest radiography for tuberculosis (TB) screening, TB treatment for TB+ patients, and annual drug monitoring. Cost of Illness (COI) included direct costs (e.g. total ambulatory/hospital care, diagnostic testing, assistive devices, travel to visits, nonallopathic treatments, etc.) and indirect costs (e.g. short-term leave, paid work disability, etc.). Informal caregiver cost was not included. Cost was linked to BASDAI and BASFI scores reported in the Kobelt study by performing OLS regression. The two resulting models (BASDAI_{cost} and BASFI_{cost}) with regression equations: $\log \text{COST} = 3.168 + 0.145455 * \text{BASFI}$ and $\log \text{COST} = 3.594667 + 0.049879 * \text{BASDAI}$, respectively, were then used to estimate COI. Univariate Sensitivity Analysis was conducted to estimate percent changes in ICER from the base-case using parameters such as response rates, discount rates, and discontinued rates. QALYs and cost were discounted at 3%. **RESULTS:** The BASDAI_{cost} model revealed an ICER of \$46,990. Meanwhile, the BASFI_{cost} model had an ICER of \$38,636. In the UA analysis, the ICERs in the BASDAI_{cost} and BASFI_{cost} models varied from \$36,068 to \$66,472 and \$22,766 to \$66,539, respectively. Both models were sensitive to changes in response rates. However, overall, the ASDAI_{cost} model was more robust than the BASFI_{cost} model. **CONCLUSIONS:** In the UK, the threshold level recommended by NICE for treatment was about £30,000/QALY. This translates into US\$53,589. Using the NICE threshold, Anti-TNFα treatment for AS is cost-effective from the societal perspective.

PAR12

A COST-EFFICACY ANALYSIS MODEL FOR ANTI-TNF AGENTS IN PSORIATIC ARTHRITIS

Arjunji RV, Dabbous OH, Rahman MI

Centocor, Inc, Horsham, PA, USA

OBJECTIVES: To provide a cost-efficacy (CE) analysis from a third-party payer perspective of etanercept and infliximab, compared to placebo in psoriatic arthritis patients. **METHODS:** An Excel based CE model was developed to estimate number needed to treat (NNT) and cost per successful outcome using published, 24-week CE data for etanercept and infliximab. Dosing information was obtained from product labels. Plan-specific drug costs, and administration costs were utilized in the model. The cost of adverse events was not included in the model. The NNT and cost per successful outcome were estimated using the American College of Rheumatology scores (ACR 20, 50, 70), the Psoriasis Area and Severity Index scores (PASI 50, 75, 90), and a combination of ACR and PASI scores. **RESULTS:** Based on the ACR scores, the NNT ranges were 2.6 to 4.0 for infliximab and 2.7 to 12.5 for etanercept. Using the PASI score, the NNT ranges were 1.5 to 2.6 for infliximab and 3.5 to 33.3 for